

Amendments to the Claims

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (previously presented) A lock mechanism for locking a movable member to a base member, comprising:

a cam fixed on the base member, and having a projection with a roughly heart shape and a swing groove formed around the projection,

a swing member provided on the movable member to move laterally and vertically relative to the cam, and having a tip and a pin close to the tip for tracing the swing groove, and

a spring member as auxiliary means provided on the base member and contacting the swing member while the pin is tracing the swing groove so that the auxiliary means allows the swing member to move properly, said spring member being located adjacent to the cam and contacting the tip of the swing member when the swing member is moved close to the projection, to thereby urge the swing member from one side of the projection toward the other side of the projection.

2. (original) A lock mechanism according to claim 1, further comprising urging means for urging the movable member relative to the base member so that the movable member is stopped at a first position through an engagement of the pin and the projection by pushing the movable member against a force of the urging means, and the engagement is released by pushing the movable member again to allow the movable member to move to a second position.

3-4. (canceled)

5. (previously presented) A lock mechanism according to claim 1, wherein said spring member contacts the swing member with a force larger than a momentum applied to the swing member downwardly.

6. (original) A lock mechanism according to claim 5, wherein said

cam is arranged to face laterally so that the spring member pushes the swing member upwardly.

7. (original) An opening-closing device comprising said movable member, said base member, said lock mechanism, and said urging means according to claim 2, wherein the movable member is switched between the first position where the movable member closes an opening of the base member and the second position where the opening is opened, and said cam is arranged to face laterally.

8. (original) An opening-closing device of the movable member according to claim 7, further comprising arms rotatably attached to side walls of the base member, said movable member being rotatably attached to the arms and having a plate extending downwardly therefrom and moving along grooves formed on the side walls, said plate being pivotally connected to the swing member.

9. (currently amended) A lock mechanism ~~according to claim 1,~~ for locking a movable member to a base member, comprising:

a cam fixed on the base member, and having a projection with a roughly heart shape and a swing groove formed around the projection,

a swing member provided on the movable member to move laterally and vertically relative to the cam, and having a tip and a pin close to the tip for tracing the swing groove, and

a spring member as auxiliary means provided on the base member and contacting the swing member while the pin is tracing the swing groove so that the auxiliary means allows the swing member to move properly, said spring member being located adjacent to the cam and contacting the tip of the swing member when the swing member is moved close to the projection, to thereby urge the swing member from one side of the projection toward the other side of the projection, wherein said spring member is arranged such that when the pin does not engage the cam, the spring member does not contact the swing member.

10. (currently amended) A lock mechanism according to claim 9,

wherein said spring member is attached to the base member at a side away from the swing member so that the spring member contacts the swing member to urge obliquely ~~only~~ when the pin engages the cam.

11. (previously presented) A lock mechanism according to claim 10, wherein said spring member is a linear or plate spring and is arranged in an inclined state relative to the base member.